GE
Water & Process Technologies

Material Safety Data Sheet

Issue Date: 08-MAY-2006
Supercedes: 08-MAY-2006

STEAMATE NA702

1 Identification of Product and Company

Identification of substance or preparation
STEAMATE NA702

Product Application Area
Condensate return line treatment.

Company/Undertaking Identification
GE Betz, Inc.
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Trevose, PA 19053
T 215 355-3300, F 215 953 5524

Emergency Telephone
(800) 877-1940

Prepared by Product Stewardship Group: 215 355-3300

2 Composition / Information On Ingredients

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

HAZARDOUS INGREDIENTS:

Cas#	Chemical Name	Range(w/w%)
100-37-8	DIETHYLAMINOETHANOL (DEAE) Combustible liquid; corrosive (eyes and skin); irritant (respiratory); absorbed by skin; potential skin sensitizer	40-70
108-91-8	CYCLOHEXYLAMINE Flammable; corrosive; toxic (by ingestion and skin absorption)	30-60

3 Hazards Identification

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EMERGENCY OVERVIEW

DANGER

Corrosive to skin. Absorbed by skin. Potential skin sensitizer. Corrosive to the eyes. Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract. Prolonged exposure may

cause dizziness and headache.

DOT hazard: Corrosive to skin, Combustible
Odor: Amine; Appearance: Light Yellow, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus(full face-piece type). Proper fire-extinguishing media: dry chemical, carbon dioxide, or foam--Water spray should be used only to cool fire-exposed containers and disperse vapors.

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POTENTIAL HEALTH EFFECTS

ACUTE SKIN EFFECTS:
Primary route of exposure; Toxic; Corrosive to skin. Absorbed by skin. Potential skin sensitizer.

ACUTE EYE EFFECTS:
Corrosive to the eyes.

ACUTE RESPIRATORY EFFECTS:
Primary route of exposure;Toxic;Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

INGESTION EFFECTS:
Toxic;
May cause severe irritation or burning of mouth, throat, and gastrointestinal tract with severe chest and abdominal pain, nausea, vomiting, diarrhea, lethargy and collapse. Possible death when ingested in very large doses.

TARGET ORGANS:
Prolonged or repeated exposures may cause primary irritant dermatitis, tissue necrosis, and/or toxicity to the nervous system.

MEDICAL CONDITIONS AGGRAVATED:
Asthma, allergies, skin disorders, and chronic respiratory disease.

SYMPTOMS OF EXPOSURE:
Inhalation may cause lightheadedness, slurred speech, nausea, and/or vomiting (pulmonary edema may result). Skin contact can cause severe irritation or burns.

4 First Aid Measures

SKIN CONTACT:
URGENT! Wash thoroughly with soap and water. Remove contaminated clothing. Get immediate medical attention. Thoroughly wash clothing before reuse.

EYE CONTACT:
URGENT! Immediately flush eyes with plenty of low-pressure water for at least 20 minutes while removing contact lenses. Hold eyelids apart. Get immediate medical attention.

INHALATION:
Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention.

INGESTION:
Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician.

Dilute contents of stomach using 3-4 glasses milk or water.

NOTES TO PHYSICIANS:

Material is corrosive. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage.

5 Fire Fighting Measures

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

EXTINGUISHING MEDIA:

dry chemical, carbon dioxide, or foam--Water spray should be used only to cool fire-exposed containers and disperse vapors.

HAZARDOUS DECOMPOSITION PRODUCTS:

elemental oxides

FLASH POINT:

117F 47C SETA(CC)

MISCELLANEOUS:

Corrosive to skin, Combustible

UN 2734;Emergency Response Guide #132

6 Accidental Release Measures

PROTECTION AND SPILL CONTAINMENT:

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Remove ignition sources. Flush area with water. Spread sand/grit.

DISPOSAL INSTRUCTIONS:

Water contaminated with this product may be sent to a sanitary sewer treatment facility,in accordance with any local agreement,a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

7 Handling & Storage

HANDLING:

Combustible. Corrosive to skin and/or eyes.

STORAGE:

Keep containers closed when not in use. Keep away from flames or sparks. Bond containers during filling or discharge when performed at temperatures at or above the product flash point.

8 Exposure Controls / Personal Protection

EXPOSURE LIMITS

CHEMICAL NAME

DIETHYLAMINOETHANOL (DEAE)

PEL (OSHA): 10 PPM(SKIN)

TLV (ACGIH): 2 PPM(SKIN)

CYCLOHEXYLAMINE

PEL (OSHA): 10 PPM

TLV (ACGIH): 10 PPM

ENGINEERING CONTROLS:

Adequate ventilation to maintain air contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Use protective equipment in accordance with 29CFR 1910 Subpart I

RESPIRATORY PROTECTION:

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.
USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS.
If air-purifying respirator use is appropriate, use a respirator with organic vapor cartridges and dust/mist prefilters.

SKIN PROTECTION:

gauntlet-type neoprene gloves, chemical resistant apron--
Wash off after each use. Replace as necessary.

EYE PROTECTION:

splash proof chemical goggles, face shield

9 Physical & Chemical Properties

Specific Grav.(70F,21C)	0.895	Vapor Pressure (mmHG)	ND
Freeze Point (F)	< -29	Vapor Density (air=1)	ND
Freeze Point (C)	< -34		
Viscosity(cps 70F,21C)	20	% Solubility (water)	100.0

Odor		Amine
Appearance		Light Yellow
Physical State		Liquid
Flash Point	SETA(CC)	117F 47C
pH As Is (approx.)		12.6
Evaporation Rate (Ether=1)		< 1.00
Percent VOC:		95.0

NA = not applicable ND = not determined

10 Stability & Reactivity

STABILITY:

Stable under normal storage conditions.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

May react with acids.

DECOMPOSITION PRODUCTS:

elemental oxides

INTERNAL PUMPOUT/CLEANOUT CATEGORIES:

"C"

11 Toxicological Information

Oral LD50 RAT: 350 mg/kg
NOTE - Estimated value
Dermal LD50 RABBIT: 550 mg/kg
NOTE - Estimated value
Skin Irritation Score RABBIT: >5.0
NOTE - Based on similar product; EPA# I:corrosive; DOT corrosive:60 minutes, not 3 min.
Eye Irritation Score RABBIT: CORROSIVE
NOTE - 15% Cyclohexylamine score:101, +/-rinsing, constant irritation, nonreversible

12 Ecological Information

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay (pH adjusted)
LC50= 319; No Effect Level= 125 mg/L
Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)
LC50= 758; No Effect Level= 500 mg/L

BIODEGRADATION

BOD-28 (mg/g): 329
BOD-5 (mg/g): 1
COD (mg/g): 2386
TOC (mg/g): 593

13 Disposal Considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is : D001=Ignitable;D002=Corrosive(pH).

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14 Transport Information

DOT HAZARD: Corrosive to skin, Combustible
PROPER SHIPPING NAME: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.(CYCLOHEXYLAMINE, DIETHYLAMINOETHANOL)
8(3), UN 2734, PG II
DOT EMERGENCY RESPONSE GUIDE #: 132
Note: Some containers may be DOT exempt, please check BOL for exact container classification

15 Regulatory Information

TSCA:

All components of this product are listed in the TSCA inventory.

CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

3,541 gallons due to CYCLOHEXYLAMINE;

FOOD AND DRUG ADMINISTRATION:

ALL ingredients in this product are authorized in 21CFR173.310 for use as boiler water additives where the steam may contact food.

USDA FOOD PLANT APPROVALS:

SEC.G6

SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Delayed(Chronic);Fire

SARA SECTION 302 CHEMICALS:

CAS#	CHEMICAL NAME
108-91-8	CYCLOHEXYLAMINE

SARA SECTION 313 CHEMICALS:

No regulated constituent present at OSHA thresholds

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):

This product contains one or more ingredients known to the state of California to cause cancer.

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16 Other Information

NFPA/HMIS		**CODE TRANSLATION**
Health	3	Serious Hazard
Fire	2	Moderate Hazard
Reactivity	0	Minimal Hazard
Special	CORR	DOT corrosive
(1) Protective Equipment	D	Goggles,Face Shield,Gloves,Apron

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

CHANGE LOG

	EFFECTIVE DATE	REVISIONS TO SECTION:	SUPERCEDES
MSDS status:	13-FEB-1997		** NEW **
	18-MAR-1997	15	13-FEB-1997
	15-MAY-1997	15	18-MAR-1997
	24-SEP-1997	15	15-MAY-1997
	05-MAY-2000	12	24-SEP-1997
	08-MAY-2006	3,4,5,8,15	05-MAY-2000